ACC.12
61st Annual Scientific Session & Expo
ACC-i2 with TCT innovation in intervention

E1324
JACC March 27, 2012
Volume 59, Issue 13

Imaging

INCREMENTAL VALUE OF CORONARY CT ANGIOGRAPHY OVER STRESS TESTING IN PREDICTING OUTCOMES AND RESOURCE UTILIZATION

ACC Moderated Poster Contributions
McCormick Place South, Hall A
Saturday, March 24, 2012, 11:00 a.m.-Noon

Session Title: Imaging: CT - Prognosis
Abstract Category: 24. Imaging: CT
Presentation Number: 1108-432

Authors: *Kavitha Chinnaiyan, Judith Boura, Michael Gallagher, Gilbert Raff, William Beaumont Hospital, Royal Oak, MI, USA*

Background: The incremental prognostic value of coronary CT angiography (CCTA) over stress testing has not been well-studied.

Methods: We included patients without prior coronary artery disease (CAD) undergoing CCTA after stress testing within 3 months, divided into 3: normal, equivocal or abnormal stress tests. Demographics, downstream major adverse cardiac events (MACE) (death, acute coronary syndromes and revascularization) and resource utilization (CAD-related hospitalizations and emergency department visits, stress tests, invasive coronary angiography and surgical/percutaneous revascularization) were compared among the groups.

Results: 2537 patients (mean age 57 ± 12 years, 49% males, 68% myocardial perfusion imaging, 20% stress echocardiography, 12% stress EKG) were included. Overall, 19.7% had a coronary stenosis >50% on CCTA, with no differences among the 3 stress test result groups (p = 0.63). At median follow-up of 370 days, MACE and resource utilization were 4.2% and 27.5%, with no differences among the 3 groups (p = 0.60 and p = 0.44%). Stenosis >50% on CCTA was the strongest predictor of MACE (Figure).

Conclusions: CAD severity assessed by CCTA provides significant and incremental value over clinical risk and stress test results for predicting MACE and resource utilization at intermediate-term follow-up.